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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,246	10/31/2003	Nobuyuki Nonaka	SHO-0049	9027
23353 7590 10/02/2008 RADER FISHMAN & GRAUER PLLC LION BUILDING 1233 20TH STREET N.W., SUITE 501 WASHINGTON, DC 20036				
EXAMINER				
PANDYA, SUNT				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/697,246

Applicant(s)

NONAKA, NOBUYUKI

Examiner

SUNIT PANDYA

Art Unit

3714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

This action is in response to amendment received 13 May 2008. The examiner acknowledges that claims 1, 2, 5 & 6 have been amended. Therein claims 1-9 are pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liang et al. (U.S. Patent Publication 2003/0016318).

Liang et al. disclose the invention substantially as claimed including:

a color display unit having a pixel unit that is formed by arranged each one of a plurality of kinds of pixel electrodes that display predetermined colors (i.e. electrodes representing the colors red, green, and blue);

one pixel being constituted by a pair of adjacent pixels units or sub-pixels of the whole pixel (figure 3);

the pixels being arranged in a matrix in an "xy plane", and as seen in figure 3, the pixel electrodes of the same color are arranged in the y direction and the same pattern is continuously arranged in the x direction to form a stripe (figure 3); and

an information signal that is sent to the pixel electrodes at the same time, to both sets of one of the plurality of colors, such as sending an information signal to both electrodes that represent the color red to enable both electrodes to present a red lighting at the same time (paragraphs 0017-0019).

Liang et al. explicitly lack disclosing the pitch is equal to $\tan(\pi/180/\text{NPLD})(d/2)(1+\alpha)$ or less than $\tan(\pi/180/\text{NPLD})(d)$, wherein NPLD is an integer within the range of 1 & 40. In this equation: d is the distance at which the player views the display unit from in a normal posture, wherein specifically d is between 300-500 millimeters and α is a correction factor, wherein specifically α is ± 0.1 -0.2 (interpreted as adjusting the pitch by 10-20% in either direction).

A user of the display unit viewing the display at a distance d from the display unit, wherein d is between 300-500 millimeters or 11.81-19.69 inches, respectively, would have obvious to any person of ordinary skill in the art or any person at all really. One would be motivated to use a d as set forth for at least two simple reasons: (1) most user's arms are not much longer than 3 feet or 914 mm, thus, for comfortability of the user, the user would obviously need to be seated at least half way closer than their arm span to use the display unit and any associated hardware. (2) the average person cannot sit too close to a display unit, such as 3 inches away or sit too far from the display, such as 10 feet away, for the simple reason that eyes get irritated in either situation, as they're being overused and stressed to focus on what is shown on the screen, thus, for comfortability of the user, the user would obviously need to be seated at a reasonable distance to view the contents of the display, and in a gaming device environment. Therefore, the Examiner submits that specifying a distance, d, being 300-

500mm would have been obvious to one of ordinary skill in the art in order for a user to interact with the display and still be a comfortable distance away, such that the user's eyes do not get irritated.

A pitch, as notoriously well known and defined in the art, is the distance between the pixel units. When implementing the given equation of pitch and using the lowest most and highest most correction factor, the range of pitches appears to be 0.12 mm to 0.2989 mm. These values are well known "average" pitch values, such that one of ordinary skill in the art would find it obvious to have the pitch at the lower end of the range when a user is at a closer distance and further away when the user is at a further distance from the display unit, so that a user can make out what is on the screen. For instance, if the dot pitch used was at the high end of 0.2989 mm and the user was around 300 mm away, everything would look very big to the user, putting stress on the eyes. The vise versa would be true at a pitch of 0.12 and a distance of 500, everything would be too small. Thus, it appears, the claimed formula is used to mask the end result of having well-known average pitch values as the range of possible pitch values.

Therefore, it would have been obvious to one of ordinary skill in the art to modify Liang et al. to implement the specific the formula discussed above or any equivalent formula, using the range of 300-500 mm as the distance away the user's eyes are, to obtain the same average well-known range of pitch values in order to provide a display unit with suitable sharpness and viewability for users of a gaming machine, who need to be retained for their long-term use of the gaming machine, which generates revenue for the gaming establishment.

Liang et al. appear to explicitly lack disclosing the claimed ranges of 5 to 35 pixel lines per degree. Regardless of such a deficiency, the Examiner submits that it would have been well within the ordinary level of skill to the display device designer to incorporate known values in the design of the Liang et al. device. The applicant has not shown how said ranges provide any unexpected or critical results, and it appears the prior art would have worked equally well when implemented using the claimed ranges. It has been held that where claimed ranges overlap or lie inside ranges disclosed by the prior art, a prima facie case of obviousness exists. See *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976) or *In re Woodruff*, 919 F.2d 1575, 16 USPQ 1934 (Fed. Cir. 1990). Thus, the Examiner submits those of ordinary skill with the knowledge of the Liang et al. device would have found the claimed ranges to overlap those known in the art and therefore, those skilled in the display arts would have expected the claimed ranges to have the same properties. Further, clearly a game player would only be sitting within a reasonable distance and within a reasonable angle from the image device, and thus, the first and second pixel units. That is, the average player sits directly perpendicular or couple of degrees off from the image display device. The only factors that appears to effect the pitch p in the relationship described above is the distance d and the angle $NPLD$, and given such a distance and angles are well known, common, and arguable inherent to a player playing the gaming machine having this image display device, clearly the pitch between the first and second pixel units and the angle of the player viewing the display device would satisfy the claimed relationship. Therefore, it would have been obvious to those of ordinary skill in the art at the time the invention was made to modify Liang et al. with known values for pixels lines per degree and pitch

(where the pitch satisfies the relationship discussed above) to achieve expected results with improved resolution due to a higher number of pixel lines per degree resulting in a better image at no cost, implementation of said values appear to produce predictable or expected results of increased resolution, which is common place when introducing these known values. Additionally, it appears no unexpected results arise from implementing the claimed ranges, thus, these ranges are deemed non-critical to patentability. See Also MPEP 2144.05 entitled "Obviousness of Ranges".

It should be noted that the Applicant may submit evidence to show that the claimed ranges are critical, such as the claimed ranges may achieve unexpected results relative to what the Examiner has stated is well known in the art. See MPEP 2144.05, section III. In the above rejection, the prior art is one of ordinary skill's knowledge in the art.

Regarding claim 8, although Liang et al. fails to explicitly teach the use of the display as a LCD provided in a game board. However it is notoriously well known in the art to use such LCDs in game boards and would be a mere matter of routine to one of ordinary skill in the art to adapt the display to a game board since it is known that LCDs provide better picture quality and take up less space than conventional CRTs.

Response to Arguments

Applicant's arguments filed May 13, 2008 have been fully considered but they are not persuasive. The updated rejection above includes any newly added claim language; thus, a response to arguments is included with the updated rejection above. Therefore, the Applicant is directed to the rejection of claims 1-9 as set forth above.

Furthermore, the only argument throughout Applicant's Remarks appears to be that Liang et al. fail to teach that the pitch P between the first and second pixel units and a distance d from the first and second pixel units satisfies a relationship of $P < \tan(180/NPLD) \times d$, wherein $NPLD$ is an integer between 1 & 40. In analyzing this relationship, it appears the distance d , and $NPLD$ are the only variable that affects the relationship. Thus, as described in the rejection above and as clear to those skilled in the art, a game player playing a gaming machine having the claimed image display device would inherently be seated within a reasonable distance d and within certain range of an angle from the display device. Therefore, there appears to be no patentable significance to the claimed values or formulas.

Consequently, the Applicant is kindly invited to file explicit evidence to show criticality of any of the recited values, ranges, or formulas to show unexpected results, as currently, the Examiner concludes that no unexpected results are obtained from the numerous common values in the image display arts implemented in the claimed invention.

For at least these reasons, the rejections of all claims are maintained or updated herein.

Examiner has cited particular paragraph numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant, in preparing the responses, to fully consider

the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SUNIT PANDYA whose telephone number is (571)272-2823. The examiner can normally be reached on M-F 8 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pezzuto can be reached on 571-272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert E Pezzuto/
Supervisory Patent Examiner, Art Unit 3714

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